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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/653,823 | 09/03/2003 | Toshihiro Takeuchi | SHM-14986 | 4117 |
| 40854 7590 09/10/2007 RANKIN, HILL, PORTER & CLARK LLP 38210 Glenn Avenue WILLOUGHBY, OH 44094-7808 | | | EXAMINER AMIRI, NAHID | |
| | | | ART UNIT 3679 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/653,823

Applicant(s)

TAKEUCHI, TOSHIHIRO

Examiner

Nahid Amiri

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3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-911 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12,14,17 and 18 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION***Response to Amendment***

In view of Applicant's Amendment received 8 June 2007, amendments to the claims have been entered. Claims 5, 6, 10, and 13 are canceled. Claims 1-4, 7-9, 11, 12, and 14-19 are pending.

Claims 7-9, 15, and 16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8 June 2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

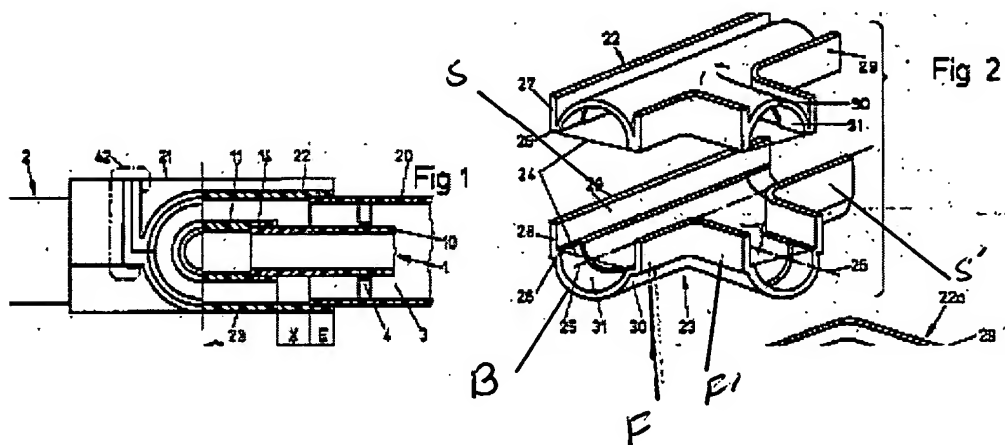
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,925,218 Kunz et al. in view of JP 02004190755 A Kumagai.

With respect to claim 1, at the outset, it should be noted that patentability in a product-by-process claim is based on the resultant structure of the product and not the recited process steps. Kunz et al. disclose a joint frame joint structure (23, Figs. 1-2) comprising a first frame member (F) of U-shaped cross section having a first sidewall (S), a second sidewall (S'), a bottom wall (B) and an opening; a second frame member (F') similar to the first frame member (F) of U-shaped cross section having an opening, said second frame member (F') having an end portion connected to at least one of the first sidewall (S) and the second sidewall (S') of the first frame member (F) so as to define a joint constituted by an integral joint between first and second frame members (F, F'); a reinforcing member (constituted by the pipe 10 which inherently acts as a

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reinforcing member via a spacer 4 to ensure the coaxial position of the outer pipe 20) extending into the first frame member (F) and the second frame member (F') by predetermined lengths at a joint of the first frame member (F) and the second frame member (F'); a plate member (22) closing the openings of the first and second frame members (F, F') to form closed cross sections. Kunz et al. do not disclose a foamed resin filling spaces defined by the plate member, the first and second frame member and the reinforcing member. Kumagai teaches (Fig. 1, abstract) a foamed resin (13) placed in a space between the pipe (14) and reinforcing member (14). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the joint of Kunz et al. with a foamed resin as taught by Kumagai in order to closed the gap between two pipes. With respect to the added process recitation pertaining to how the foamed resin is formed, the resultant combination possesses a "foamed resin" and that is all that is necessary to meet the claim.



With respect to claim 2, Kunz et al. disclose (Fig. 2, column 2, lines 8-10) that the reinforcing member (10) is generally T-shaped.

With respect to claim 3, Kunz et al. disclose (Fig. 3, column 2, lines 60-61) that the reinforcing member (10) is generally L-shaped.

With respect to claim 11, Kunz et al. disclose (Fig. 2) the second frame member (F') having an end portion connected to one of the first and second sidewalls (S') of the

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first frame member (F), wherein the one of the first and second sidewalls (S') of the first frame member (F) has a hole formed therein; and wherein the hole is larger than a cross-sectional dimension of the reinforcing member (10) such that the reinforcing member (10) may freely extend through the hole in the first frame member (F). Kunz et al. do not disclose that a space surrounding the reinforcing member (10) and the one of the first and second sidewalls of the first frame member (F) at the hole being filled with the foamed resin. Kumagai teaches (Fig. 1, abstract) a foamed resin (13) placed in a space between the pipe (14) and reinforcing member (14). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the joint of Kunz et al. with a foamed resin as taught by Kumagai in order to closed the gap between two pipes. with a foamed resin as taught by Kikuchi in order to form a hard skin which function as a layer of the reinforcing material.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kunz et al. and Kumagai as applied to claims 1-3 and 11 above, and further in view of US Patent No. 3,948,247 Heilemann.

With respect to claim 4, Kunz et al. suggest (Fig. 5) that the plate member (22), the first and second frame members (F, F'), and reinforcing member (10) may be made of metal in view of the illustration of metal cross-hatching. Kunz et al. do not disclose that the plate member and the first and second frame members are made from a first metal material, which is different from a second metal material of the reinforcing member, and are affixed to one another by welding. Heilemann teaches a device (column 5, lines 13-16) having a combination of an aluminum plate with a copper pipe, i.e., two different metal materials. It would have been an obvious matter of design choice to one of ordinary skill in the art to provide Kunz with the first, second frame members and the plate member from first metal member which affixed them to one another by welding and the reinforcing member from a second metal member which is different from first metal member as taught by Heilemann so as to provide chemically compatible materials to minimize corrosion.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 11, 12, and 14 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 12, 14, 17, and 18 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 12, line 30, the closest prior art Kunz et al. (US 4,925,218) discloses the claimed connecting device with the exception of the plate member is generally planar, and wherein the plate member and the first and second frame members are formed from a first metal material and are affixed to one another by welding. There is no motivation to have upper portion of Kunz et al. to be a planar surface, since Kunz et al.'s invention is a pipe.

Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 19, lines 1-2, the closest prior art Kunz et al. (US 4,925,218) discloses the claimed connecting device with the exception of the plate member is generally planar, and (lines 4-5) the plate member and the first and second frame members are formed from a first metal material and are affixed to one another by welding. There is no motivation to have upper portion of Kunz et al. to be a planar surface, since Kunz et al.'s invention is a pipe.


There is no teaching or suggestion, absent the applicants' own disclosure, for one having ordinary skill in the art at the time the invention was made to modify the connector device as disclosed by Kunz et al. (US 4,925,218) to have the above mentioned elemental features.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Nahid Amiri
Examiner
Art Unit 3679
August 14, 2007



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